

Application No.: 09/412,863
Page 2

VTIKIGGQLK,
QMVHQAISPR,
IWGCSGKLI,
PYNEWTLEL,
EVNIVTDSQY,
VTVLDVGDAY,
QMAVFIHNFK
WAGIKQEGIPYNPQ,
KVYLAWVPAHKGIGG,
QHLLQLTVWGIKQLQ,
FRKYTAFTIPSINNE,
YRKILRQRKIDRLID,

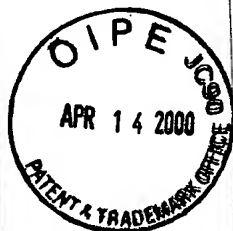
TTLFCASDAK,
PYNTPVFAI,
VWKEATTTLF,
KIQNFRVYYR,
FRDYVDRFY,
IYQEPFKNL,
QKQITKIQNFRVYYR, IKQFINMWQEVGKAMY,
GAVVIQDNSDIKVVP WEFVNTPLVLKLYQ,
GEIYKRWIILGLNKI, EKVYLAWVPAHKGIG,
QGQMVHQAISPRTL, SPAIFQSSMTKILEP,
HSNWRAMASDFNLPP, KTAVQMAVFIHNFKR,
EVNIVTDSQYALGII, and AETFYVDGAANRETK.

41. The composition of claim 40, wherein the epitope is selected from the

group consisting of:

VLAEAMSQV,
LVGPTPVNI,
KLTPLCVTL,
LTFGWCFL,
KVYLAWVPAHK,
VTIKIGGQLK,
QMVHQAISPR,
IWGCSGKLI,
PYNEWTLEL,
GEIYKRWIILGLNKI,
QGQMVHQAISPRTL,
HSNWRAMASDFNLPP,
EVNIVTDSQYALGII, and

MTNPNPIP, KLVGKLNWA,
KMIGGIGGF, TLNFPISPI,
LLQLTVWGI, SLLNATDIAV,
AIRIDQQL, RILQQLFI,
MTKILEPFR, AIFQSSMTK,
TTLFCASDAK, VTVYYGVPVWK,
PYNTPVFAI, YWQATWIPEW,
VWKEATTTLF, IYETYGDTW,
WEFVNTPLVLKLYQ, KVYLAWVPAHKGIGG,
EKVYLAWVPAHKGIG, QHLLQLTVWGIKQLQ,
SPAIFQSSMTKILEP, FRKYTAFTIPSINNE,
KTAVQMAVFIHNFKR, YRKILRQRKIDRLID,
AETFYVDGAANRETK.



Application No.: 09/412,863

Page 3

42. The composition of claim 40, further comprising two epitopes selected from the group in claim 40.
43. The composition of claim 42, further comprising three epitopes selected from the group in claim 40.
44. The composition of claim 40, wherein the composition further comprises a cytotoxic T lymphocyte (CTL) epitope selected from the group consisting of ILKEPVHGV, QVPLRPMTYK, VMIVWQVDR, FPISPIETV, CPKVSFEPI, FPVRPQVPL, RYLKDQQLL, KRWILGLNKIVRMY, MASDFNLPPV, KAACWWAGI, RAMASDFNL, YPLASLRSFL, HPVHAGPIA, IPIHYCAPA, and VPLQLPPL.
45. The composition of claim 40, wherein the composition further comprises a helper T lymphocyte (HTL) epitope.
46. The composition of claim 45, wherein the HTL epitope is a pan DR binding molecule.
47. The composition of claim 40, wherein the epitope is on or within a liposome.
48. The composition of claim 40, wherein the peptide is joined to a lipid.
49. The composition of claim 40, wherein the epitope is bound to an HLA heavy chain, β 2-microglobulin, and streptavidin complex, whereby a tetramer is formed.
50. The composition of claim 40, wherein the epitope is bound to an HLA molecule on an antigen presenting cell.

51. The composition of claim 50, wherein the antigen presenting cells is a dendritic cell.
52. The composition of claim 40, the composition further comprising a pharmaceutical excipient.
53. The composition of claim 40, wherein the epitope is in a unit dose form.
54. A composition comprising a prepared peptide of less than 250 amino acid residues comprising at least two human immunodeficiency virus-1 (HIV-1) peptide epitopes selected from the group consisting of:

VLAEAMSQV,	MTNNPIPV,	KLVGKLNWA,
LVGPTPVNI,	KMIGGIGGFI,	TLNFPISPI,
KLTPLCVTL,	LLQLTVWGI,	SLLNATDIAV,
LTFGWCFKL,	AIIRILQQL,	RILQQLFI,
KVYLAWVPAHK,	MTKILEPFR,	AIFQSSMTK,
VTIKIGGQLK,	TTLFCASDAK,	VTVYYGVPVWK,
QMVHQAISPR,	PYNTPVFAI,	YWQATWIPEW
IWGCSGKLI,	VWKEATTTLF,	IYETYGDTW,
PYNEWTLEL,	KIONFRVYYR,	IPYNPQSQGVV,
EVNIVTDSQY,	FRDYVDRFY,	VIYQYMDDLY,
VTVLVDVGDAY,	IYQEPFKNL,	TYQIYQEPF,
QMAVFIHNFK	QKQITKIONFRVYYR,	IKQFINMWQEVGKAMY,
WAGIKQEFGIPYNPQ,	GAVVIQDNSDIKVVP	WEFVNTPLVLKLYQ,
KVYLAWVPAHKGIGG,	GEIYKRWIIDGLNKI,	EKVYLAWVPAHKGIG,
QHLLQLTVWGIKQLQ,	QGQMVHQAISPRTLN,	SPAIFQSSMTKILEP,
FRKYTAFTIPSINNE,	HSNWRAMASDFNLPP,	KTAVQMAVFIHNFKR,
YRKILRQRKIDRLID,	EVNIVTDSQYALGI, and	AETFYVDGAANRETK.

Application No.: 09/412,863

Page 5

55. The composition of claim 54, wherein the at least two epitopes is selected from the group consisting of:

VLAEAMSQV,	MTNPPPIPV,	KLVGKLNWA,
LVGPTPVNI,	KMIGGIGGFI,	TLNFPISPI,
KLTPLCVTL,	LLQLTVWGI,	SLLNATDIAV,
LTFGWCFKL,	AIIRILQQL,	RILQQLFI,
KVYLAWVPAHK,	MTKILEPFR,	AIFQSSMTK,
VTIKIGGQLK,	TTLFCASDAK,	VTVYYGVPVWK,
QMVHQAISPR,	PYNTPVFAI,	YWQATWIPEW
IWGCSGKLI,	VWKEATTTLF,	IYETYGDTW,
PYNEWTLEL,	WEFVNTPLVLWYQ,	KVYLAWVPAHKGIGG,
GEIYKRWIILGLNKI,	EKVYLAWVPAHKGIG,	QHLLQLTVWGIKQLQ,
QGQMVHQAISPRTLN,	SPAIFQSSMTKILEP,	FRKYTAFTIPSINNE,
HSNWRAMASDFNLPP,	KTAVQMAVFIHNFKR,	YRKILRQRKIDRLID,
EVNIVTDSQYALGII, and	AETFYVDGAANRETK.	

56. The composition of claim 54, wherein at least two epitopes are linked via a spacer.

57. The composition of claim 54, further comprising a third epitope.

58. The composition of claim 57, wherein the third epitope is selected from the group consisting of ILKEPVHGV, QVPLRPMTYK, VMIVWQVDR, FPISPIETV, CPKVSFEPI, FPVRPQVPL, RYLKDQQLL, KRWIILGLNKIVRMY, MASDFNLPPV, KAACWWAGI, RAMASDFNL, YPLASLRSLE, HPVHAGPIA, IPIHYCAPA, and VPLQLPPL.

59. The composition of claim 54, further comprising a third epitope that is a helper T lymphocyte (HTL) epitope.

Application No.: 09/412,863

Page 6

60. The composition of claim 59, wherein the HTL epitope is a panDR binding molecule.
61. The composition of claim 54, wherein the peptide is on or within a liposome.
62. The composition of claim 54, wherein the peptide is joined to a lipid.
63. The composition of claim 54, wherein the peptide further comprises at least three of the epitopes in the group of claim 54.
64. The composition of claim 54, wherein the peptide further comprises at least four of the epitopes in the group of claim 54.
65. The composition of claim 54, wherein the peptide further comprises at least five of the epitopes in the group of claim 54.
66. The composition of claim 54, wherein the peptide further comprises at least six of the epitopes in the group of claim 54.
67. The composition of claim 54, the composition further comprising a pharmaceutical excipient.
68. The composition of claim 54, further wherein the epitope is in a unit dose form.